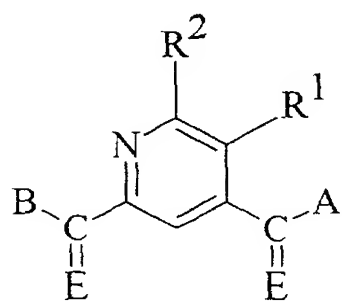
CLAIMS

What is claimed is:

1. A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering to the mammal an MMP inhibiting amount of a compound of Formula I



I

or a pharmaceutically acceptable salt thereof,

wherein:

R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

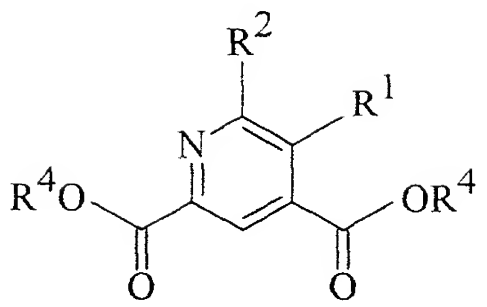
E is independently O or S;

A and B independently are OR^4 or NR^4R^5;

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted,

n is an integer from 0 to 6.

2. A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering to the mammal an MMP inhibiting amount of a compound of Formula II



II

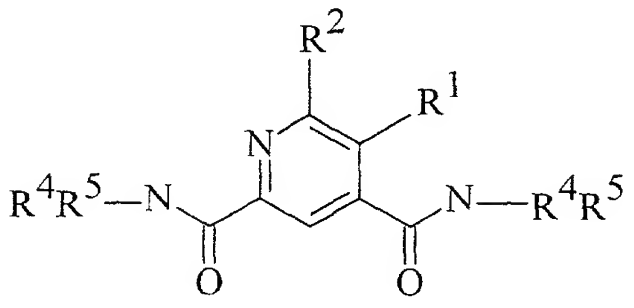
or a pharmaceutically acceptable salt thereof,

wherein R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3; and

each R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted,

n is an integer of from 0 to 6

3. A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering to the mammal an MMP inhibiting amount of a compound of Formula III



III

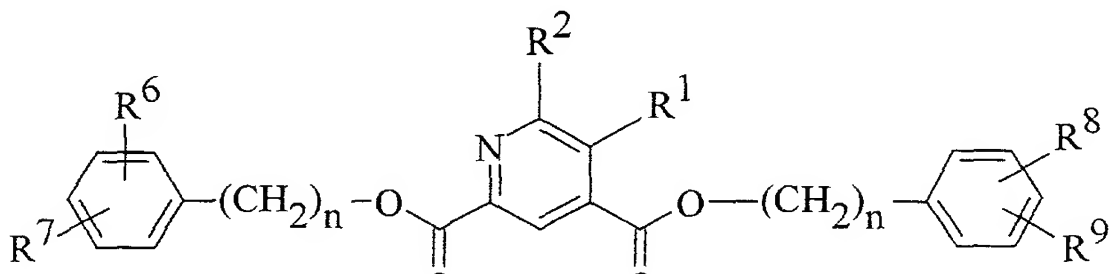
or a pharmaceutically acceptable salt thereof,

wherein R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, wherein each CH_2 is optionally substituted by one or more C_1-C_6 alkyl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted;

n is an integer of from 0 to 6.

4. A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering to the mammal an MMP inhibiting amount of a compound of Formula IV



IV

or a pharmaceutically acceptable salt thereof.

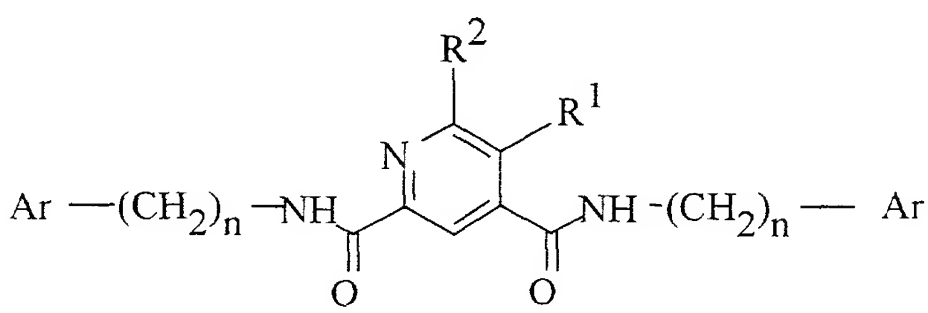
wherein n is 0 to 6,

R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, wherein each CH_2 is optionally substituted by one or more C_1-C_6 alkyl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted, and

R^6, R^7, R^8, and R^9 independently are hydrogen, halo, C_1-C_6 alkyl, C_1-C_6 alkoxy, nitro, or NH_2.

5. A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering to the mammal an MMP inhibiting amount of a compound of Formula V



V

or a pharmaceutically acceptable salt thereof,

wherein n is 0 to 6;

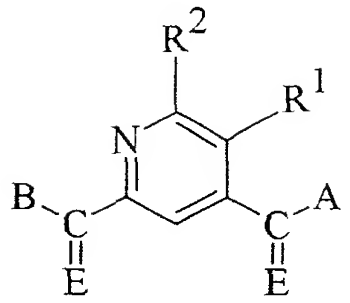
R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted;

Each Ar is independently aryl or Het, wherein aryl is phenyl or substituted phenyl;

Het is an unsubstituted or substituted heteroaryl group.

6. A compound of Formula I



I

or a pharmaceutically acceptable salt thereof,

wherein

R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

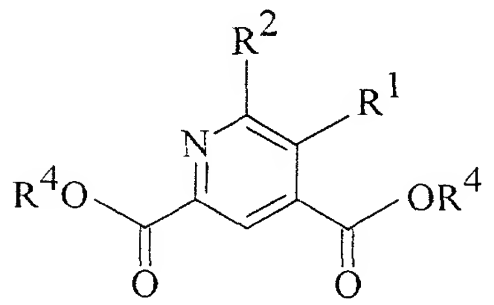
E is independently O or S;

A and B independently are OR^4 or NR^4R^5;

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted;

n is an integer from 0 to 6.

7. A compound of Formula II



II

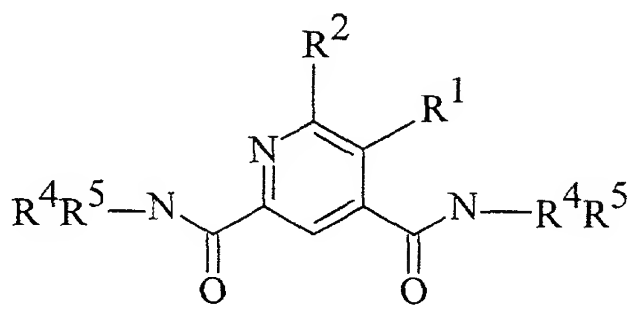
or a pharmaceutically acceptable salt thereof,

wherein R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3; and

each R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted;

n is an integer of from 0 to 6.

8. A compound of Formula III



III

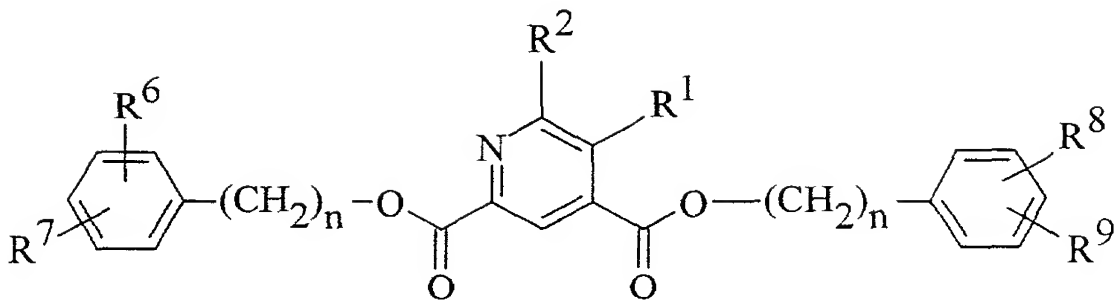
or a pharmaceutically acceptable salt thereof,

wherein R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

Each R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, wherein each CH_2 is optionally substituted by one or more C_1-C_6 alkyl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted;

n is an integer of from 0 to 6.

9. A compound of Formula IV



IV

or a pharmaceutically acceptable salt thereof,

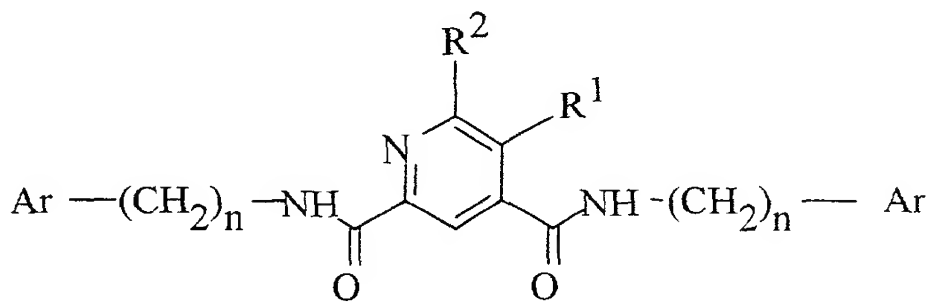
wherein n is 0 to 6;

R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, wherein each CH_2 is optionally substituted by one or more C_1-C_6 alkyl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted; and

R^6, R^7, R^8, and R^9 independently are hydrogen, halo, C_1-C_6 alkyl, C_1-C_6 alkoxy, nitro, or NH_2

A compound of Formula V



V

or a pharmaceutically acceptable salt thereof,

wherein n is 0 to 6;

R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring containing carbon atoms and optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted;

Each Ar is independently aryl or Het, wherein aryl is phenyl or substituted phenyl;

Het is an unsubstituted or substituted heteroaryl group.

11. A compound selected from:

Pyridine-2,4-dicarboxylic acid bis-(3-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid bis-(4-chloro-benzylamide);

Pyridine-3,5-dicarboxylic acid bis-(3-chloro-benzylamide);

2-Methoxy-pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-3,5-dicarboxylic acid bis-(1,3-benzodioxol-5-ylmethyl) ester;

Pyridine-3,5-dicarboxylic acid bis-(4-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide],

Pyridine-2,4-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide],

Pyridine-3,5-dicarboxylic acid bis-(4-fluoro-benzylamide);

Pyridine-3,5-dicarboxylic acid, (4-chloro-benzylamide), [(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), [(1,3-benzodioxol-5-ylmethyl)-amide],

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), (4-methoxy-benzylamide),

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), (3-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid, (4-carbomethoxy-benzylamide), (3-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), (3-pyridylmethylamide);

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), (3-thiophenemethylamide);

Pyridine-3,5-dicarboxylic acid, (2,1,3-benzothiadiazol-5-ylmethyl) amide, [(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-3,5-dicarboxylic acid, (2,1,3-benzooxadiazol-5-ylmethyl) amide, [(1,3-benzodioxol-5-ylmethyl)-amide],

Pyridine-3,5-dicarboxylic acid, (2,1,3-benzothiadiazol-5-ylmethyl) amide, (4-methoxy-benzylamide),

Pyridine-3,5-dicarboxylic acid, (2,1,3-benzothiadiazol-5-ylmethyl) amide, (3-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid bis-(1,3-benzodioxol-5-ylmethyl) ester;

2-Methoxy-pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide];

2-Ethoxy-pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide];

2-Oxo-1,2-dihydro-pyridine-3,5-dicarboxylic acid bis-benzylamide;

2-Methoxy-pyridine-3,5-dicarboxylic acid bis-benzylamide,

(3,5-Bis-benzylcarbamoyl-pyridin-2-yloxy)-acetic acid tert-butyl ester,

(3,5-Bis-benzylcarbamoyl-pyridin-2-yloxy)-acetic acid,

Pyridine-2,4-dicarboxylic acid bis-(3-methoxy-benzylamide),

Pyridine-2,4-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-(2,4-dimethoxy-benzylamide),

Pyridine-2,4-dicarboxylic acid bis-(4-chloro-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-benzylamide;

Pyridine-2,4-dicarboxylic acid bis-[(naphthalen-1-ylmethyl)-amide],

Pyridine-2,4-dicarboxylic acid bis-[(2-p-tolyl-ethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-(4-methoxy-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(3-fluoro-benzylamide),

Pyridine-2,4-dicarboxylic acid bis-(benzyl-ethyl-amide);

Pyridine-2,4-dicarboxylic acid bis-{[2-(3,4-dimethoxy-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-{[2-(2-phenoxy-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-[(4-phenyl-butyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-{[2-(4-methoxy-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-{[2-(2-fluoro-phenyl)-ethyl]-amide},

Pyridine-2,4-dicarboxylic acid bis-{[2-(3-chloro-phenyl)-ethyl]-amide},

Pyridine-2,4-dicarboxylic acid bis-{[2-(2,4-dimethyl-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-[(2-o-tolyl-ethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-{[2-(4-ethyl-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-[(2-phenyl-propyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-[(1,2-diphenyl-ethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-(2,4-dichloro-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-[(biphenyl-2-ylmethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-(3,4,5-trimethoxy-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(3-chloro-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(3,5-dimethoxy-benzylamide),

Pyridine-2,4-dicarboxylic acid bis-(3,4-dimethoxy-benzylamide),

Pyridine-2,4-dicarboxylic acid bis-(ethyl-pyridin-4-ylmethyl-amide);

Pyridine-2,4-dicarboxylic acid bis-[(2-pyridin-4-yl-ethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-[(2-pyridin-3-yl-ethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-{[2-(4-chloro-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-[(pyridin-4-ylmethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-(3,5-bis-trifluoromethyl-benzylamide),

Pyridine-2,4-dicarboxylic acid bis-(2,3-dimethoxy-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(3-trifluoromethyl-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(2-trifluoromethoxy-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(3-difluoromethoxy-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(2-difluoromethoxy-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(4-fluoro-3-trifluoromethyl-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(2-methoxy-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-{[2-(3-ethoxy-phenyl)-ethyl]-amide},

Pyridine-2,4-dicarboxylic acid bis-(3-chloro-4-fluoro-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(2,4-difluoro-benzylamide),

Pyridine-2,4-dicarboxylic acid bis-(4-amino-benzylamide),

Pyridine-2,4-dicarboxylic acid bis-(2-methyl-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-{[bis-(4-methoxy-phenyl)-methyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-[(3,3-diphenyl-propyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-[(1-methyl-3-phenyl-propyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-[(3,4-dimethoxy-phenyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-(2-fluoro-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-[(3-imidazol-1-yl-propyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-(2-chloro-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(2-trifluoromethyl-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-(4-methyl-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-{[2-(3-methoxy-phenyl)-ethyl]-amide}.

Pyridine-2,4-dicarboxylic acid bis-[(1-phenyl-ethyl)-amide],

Pyridine-2,4-dicarboxylic acid bis-[(pyridin-3-ylmethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-[(4-ethoxy-phenyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-(phenethyl-amide);

Pyridine-2,4-dicarboxylic acid bis-[(thiophen-2-ylmethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-(4-trifluoromethyl-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-[(5-methyl-furan-2-ylmethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-{[1-(4-fluoro-phenyl)-ethyl]-amide},

Pyridine-2,4-dicarboxylic acid bis-(2-amino-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-[(1-naphthalen-1-yl-ethyl)-amide],

Pyridine-2,4-dicarboxylic acid bis-{[2-(4-hydroxy-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-(3-trifluoromethoxy-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-{[1-(3-methoxy-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-[(1-phenyl-propyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-{[2-(2-methoxy-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-{[2-(3-trifluoromethyl-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-indan-1-ylamide,

Pyridine-2,4-dicarboxylic acid bis-indan-1-ylamide;

Pyridine-2,4-dicarboxylic acid bis-(3,4-dichloro-benzylamide);

Pyridine-2,4-dicarboxylic acid bis-[(2-ethoxy-ethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-{[2-(4-bromo-phenyl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-[(2-pyridin-2-yl-ethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-[(2-thiophen-2-yl-ethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-{[2-(5-methoxy-1H-indol-3-yl)-ethyl]-amide};

Pyridine-2,4-dicarboxylic acid bis-{[2-(1H-indol-3-yl)-ethyl]-amide},

Pyridine-2,4-dicarboxylic acid bis-(3,5-dichloro-benzylamide); and

2-Amino-pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5 ylmethyl)-amide]

12. A pharmaceutical composition, comprising a compound of Claim 6, or a pharmaceutically acceptable salt thereof, together with a pharmaceutically acceptable carrier, diluent, or excipient.

13. A pharmaceutical composition, comprising a compound of Claim 7, or a pharmaceutically acceptable salt thereof, together with a pharmaceutically acceptable carrier, diluent, or excipient.

14 A pharmaceutical composition, comprising a compound of Claim 8, or a pharmaceutically acceptable salt thereof, together with a pharmaceutically acceptable carrier, diluent, or excipient.

15. A pharmaceutical composition, comprising a compound of Claim 9, or a pharmaceutically acceptable salt thereof, together with a pharmaceutically acceptable carrier, diluent, or excipient.

16 A pharmaceutical composition, comprising a compound of Claim 10, or a pharmaceutically acceptable salt thereof, together with a pharmaceutically acceptable carrier, diluent, or excipient.

17. A pharmaceutical composition, comprising a compound of Claim 11, or a pharmaceutically acceptable salt thereof, together with a pharmaceutically acceptable carrier, diluent, or excipient.

18. A method for inhibiting an MMP-13 enzyme in an animal, comprising administering to the animal an MMP-13 inhibiting amount of a compound of Claim 6, or a pharmaceutically acceptable salt thereof.

19. A method for treating a cancer, comprising administering to a patient having cancer and in need of treatment an anticancer effective amount of a compound of Claim 6, or a pharmaceutically acceptable salt thereof

20 A method for treating breast carcinoma, comprising administering to a patient having cancer and in need of treatment an anticancer effective amount of a compound of Claim 6, or a pharmaceutically acceptable salt thereof

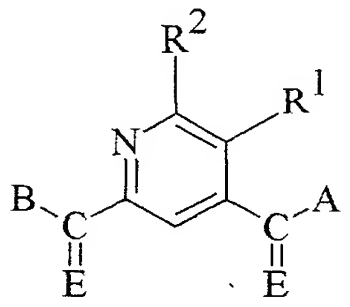
21. A method for treating osteoarthritis, comprising administering to a patient in need of treatment an effective amount of a compound of Claim 6, or a pharmaceutically acceptable salt thereof

22. A method for treating rheumatoid arthritis, comprising administering to a patient in need of treatment an effective amount of a compound of Claim 6, or a pharmaceutically acceptable salt thereof

23. A method for treating inflammation, comprising administering to a patient in need of treatment an effective amount of a compound of Claim 6, or a pharmaceutically acceptable salt thereof.

24. A method for treating heart failure, comprising administering to a patient in need of treatment an effective amount of a compound of Claim 6, or a pharmaceutically acceptable salt thereof.

25 A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering an MMP inhibiting amount of a compound of Formula I



I

wherein:

R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

E is independently O or S;

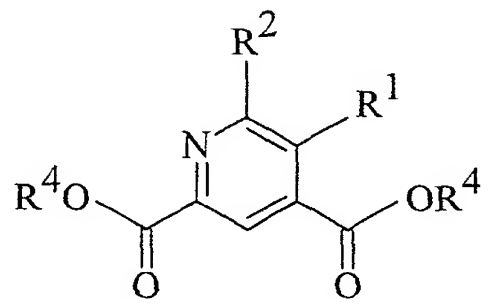
A and B independently are OR^4 or NR^4R^5,

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring, optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted;

n is an integer from 0 to 6;

and the pharmaceutically acceptable salts thereof.

26 A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering an MMP inhibiting amount of a compound of Formula II



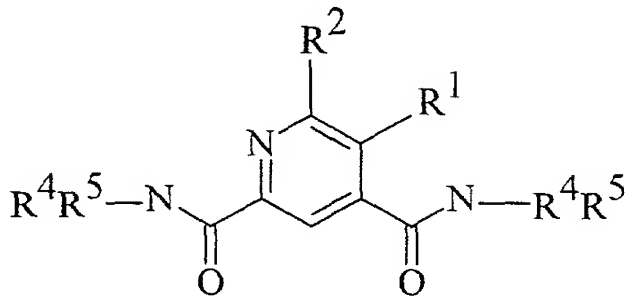
II

wherein R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3; and

each R^4 is independently H. C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl,

and the pharmaceutically acceptable salts thereof

27. A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering an MMP inhibiting amount of a compound of Formula III



III

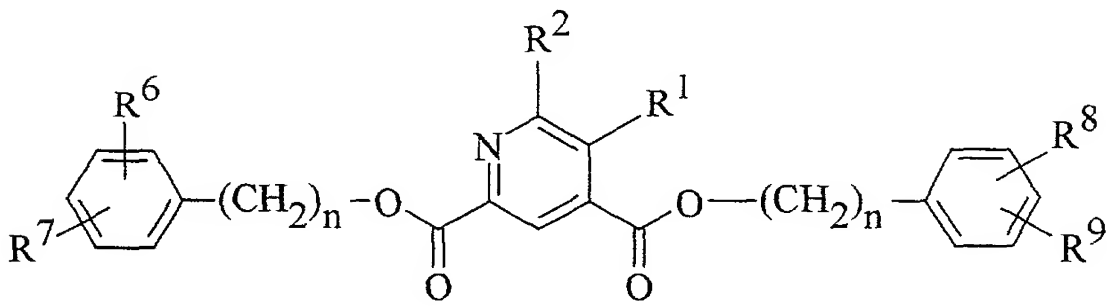
wherein R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3,

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring, optionally containing a

heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted;

and the pharmaceutically acceptable salts thereof.

28 A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering an MMP inhibiting amount of a compound of Formula IV



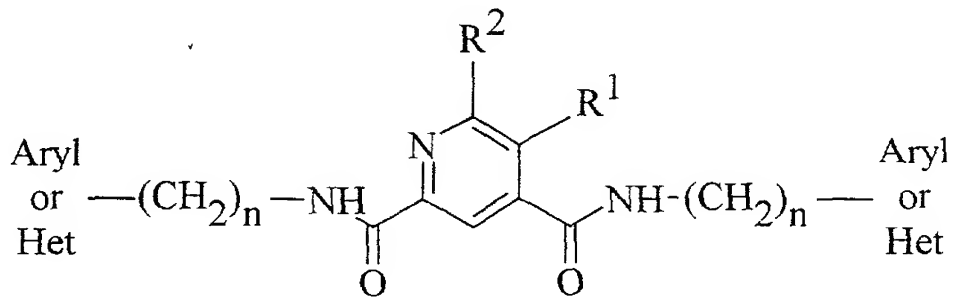
IV

wherein n is 0 to 6;

R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3; and R^6, R^7, R^8, and R^9 independently are hydrogen, halo, C_1-C_6 alkyl, C_1-C_6 alkoxy, nitro, or NH_2;

and the pharmaceutically acceptable salts thereof.

29. A method for inhibiting matrix metalloproteinase enzymes in a mammal comprising administering an MMP inhibiting amount of a compound of Formula V



V

wherein n is 0 to 6,

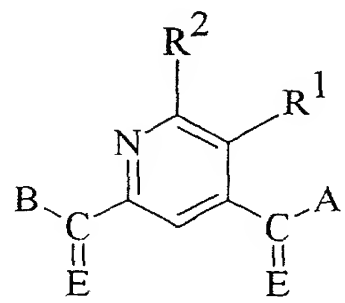
R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

Aryl is phenyl or substituted phenyl;

Het is an unsubstituted or substituted heteroaryl group;

and the pharmaceutically acceptable salts thereof.

30. A compound having Formula I



I

R^1 and R^2 independently are hydrogen, halo, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_6 alkenyl, C_2-C_6 alkynyl, NO_2, NR^4R^5, CN, or CF_3;

E is independently O or S;

A and B independently are OR^4 or NR^4R^5;

R^4 and R^5 independently are H, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $(CH_2)_n$ aryl, $(CH_2)_n$ cycloalkyl, $(CH_2)_n$ heteroaryl, or R^4 and R^5 when taken together with the nitrogen to which they are attached complete a 3- to 8-membered ring, optionally containing a heteroatom selected from O, S, or NH, and optionally substituted or unsubstituted;

n is an integer from 0 to 6,

and the pharmaceutically acceptable salts thereof.

31. A compound selected from

Pyridine-2,4-dicarboxylic acid bis-(3-methoxy-benzylamide),

Pyridine-3,5-dicarboxylic acid bis-(4-chloro-benzylamide),

Pyridine-3,5-dicarboxylic acid bis-(3-chloro-benzylamide);

2-Methoxy-pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-3,5-dicarboxylic acid bis-(1,3-benzodioxol-5-ylmethyl) ester;

Pyridine-3,5-dicarboxylic acid bis-(4-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-2,4-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-3,5-dicarboxylic acid bis-(4-fluoro-benzylamide);

Pyridine-3,5-dicarboxylic acid, (4-chloro-benzylamide), [(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), [(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), (4-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), (3-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid, (4-carbomethoxy-benzylamide), (3-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), (3-pyridylmethylamide);

Pyridine-3,5-dicarboxylic acid, (4-carboxy-benzylamide), (3-thiophenemethylamide);

Pyridine-3,5-dicarboxylic acid, (2,1,3-benzothiadiazol-5-ylmethyl) amide, [(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-3,5-dicarboxylic acid, (2,1,3-benzooxadiazol-5-ylmethyl) amide, [(1,3-benzodioxol-5-ylmethyl)-amide];

Pyridine-3,5-dicarboxylic acid, (2,1,3-benzothiadiazol-5-ylmethyl) amide, (4-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid, (2,1,3-benzothiadiazol-5-ylmethyl) amide, (3-methoxy-benzylamide);

Pyridine-3,5-dicarboxylic acid bis-(1,3-benzodioxol-5-ylmethyl) ester;

2-Methoxy-pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide],

2-Ethoxy-pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide]; and

2-Amino-pyridine-3,5-dicarboxylic acid bis-[(1,3-benzodioxol-5-ylmethyl)-amide].

32. A pharmaceutical composition comprising a compound of Claim 30 together with a pharmaceutically acceptable carrier, diluent, or excipient

33. A method for inhibiting MMP-13 enzymes in animals comprising administering to the animal an MMP-13 inhibiting amount of a compound of Claim 30.

34. A method for treating cancer comprising administering to a patient having cancer and in need of treatment an anticancer effective amount of a compound of Claim 30

35 A method for treating osteoarthritis or rheumatoid arthritis comprising administering to a patient in need of treatment an effective amount of a compound of Claim 30.